

water-insoluble binding agent that binds the masking agent to the activated carbon. Although the activated carbon is coated with a coating material which can include a material such as silicone or latex which would be expected to block the pore structure of the activated carbon, and therefore inhibit the adsorption properties, the coated activated carbon of this invention is still able to absorb odiferous agents. In addition, the coating material has the additional benefit of being able to decrease the particulate noise that can occur upon frictional contact between activated carbon particles.

#### **Amendment to the Claims**

Applicants have amended Claims 1 and 27 by further describing the coating material.

Applicants have amended Claims 1, 27, 47, and 55 to recite a water-insoluble binding agent. Support for this Amendment can be found at page 11, lines 28-31, of Applicants' Specification. Dependent Claim 28 has been canceled in view of amended Claim 27.

Applicants have amended Claim 58 to further describe the pigment of the coating material.

No new matter has been added.

### **New Claims**

Applicants have added new Claims 80-84. Support for this Amendment can be found at page 1, line 19 - page 3, line 21. No new matter has been added.

### **Claim Rejections - 35 U.S.C. §102**

Claims 27-39, 41-43, 47-51, and 55-60 have been rejected under 35 U.S.C. §102(b) as being anticipated by Ohama (U.S. Patent 5,703,152). Applicants have amended independent Claims 27, 47, 55, and 58 as previously discussed and offer the following comments.

Ohama discloses a deodorizing composition useful in combination with various known materials. The deodorizing composition is an aqueous slurry of: (1) water; (2) an iron (II) compound; (3) a chelating agent; and (4) a porous substance. The deodorizing composition is specifically disclosed as being useful in combination with the following individual materials: (1) activated carbon (described at column 4, lines 18-24); (2) fibrous materials such as paper and nonwoven fabrics (described at column 4, lines 27-30); (3) a paint composition including a resin and a pigment (described at column 4, line 39 - column 6, line 3); (4) an ink composition including a coloring agent (described at Column 6, lines 4-28); and (5) a resin composition for

forming shaped articles including a water-soluble plasticizer and a resin (described at column 6, lines 29-58).

In order for Ohama to anticipate Applicants' invention of Claims 27-39, 41-43, 47-51, and 55-60, Ohama must teach each and every limitation of those claims. Ohama discloses mixing and kneading the deodorizing composition with activated carbon, followed by molding and drying the activated carbon. (Column 4, lines 20-24). Ohama does not disclose any additional materials other than the deodorizing composition being added to the activated carbon. Applicants' claimed invention of amended independent Claims 27, 47, 55, and 58 requires a coating material including a water-insoluble binding agent. As described at page 11, lines 26-28, of Applicants' Specification, the binding agent holds the coating material to the activated carbon. Ohama does not disclose or suggest a water-insoluble binding agent.

Ohama discloses the deodorizing composition in which the iron (II) compound and chelating agent form an iron ion that is first adsorbed on the porous substrate. (Column 3, lines 60-63). The deodorizing composition is then applied as an aqueous slurry to the surface activated carbon and dried thereon, with no binding agent, particularly no water-insoluble binding agent. (Column 4, lines 20-24). In addition, Ohama does not disclose or suggest binding a colored masking agent or a

pigment to activated carbon, an elastomeric binding agent, or a binding agent including latex or silicone, as in Applicants' claimed invention.

Ohama only discloses resins and/or pigments in combination with the paint composition, ink composition and resin composition. The deodorizing composition of Ohama can be separately added to either activated carbon, the paint composition, the ink composition, or the resin composition. In order to anticipate a claim, the prior art must disclose every element of the claimed invention as arranged in the claim under review. *In re Bond*, 15 USPQ2d, 1566, 1567 (Fed. Cir. 1990). Ohama does not disclose or suggest activated carbon in combination with the paint, ink, or resin compositions, or any component of these separate compositions. In other words, the Examiner has identified individual components disclosed in the several distinct embodiments of Ohama that are alleged to be similar to elements of Applicants' invention, and has combined these components in a manner not disclosed or suggested in Ohama. For example, the Examiner on page 3 of the Office Action cites to column 4, lines 12-66 of Ohama, however, the activated carbon treated with the deodorizing composition is disclosed at lines 20-24, and lines 44-66 are directed to only the distinct embodiment of the treated paint composition.

For the reasons presented above, Applicants respectfully submit that amended independent Claims 27, 47, 55, and 58 are not anticipated by Ohama.

Claims 29-46, 48- 54, 56, 57, 59, and 60 depend from one of amended Claims 27, 47, 55, and 58 and are patentable for at least the same reasons.

### **Claim Rejections - 35 U.S.C. §103**

Claims 1-6 and 8-26, have been rejected under 35 U.S.C. §103(a) as being unpatentable over Ohama (U.S. Patent 5,703,152). As discussed above, Ohama does not disclose or suggest a water-insoluble binding agent that binds a masking agent to activated carbon, as required in Applicants' twice amended Claim 1. In addition, Ohama does not disclose or suggest activated carbon coated with a coating material that masks the color of activated carbon and includes a binding agent that is deformable (Claim 8) or hydrophobic (Claim 19). Ohama also does not disclose or suggest a coating material for activated carbon that includes a blowing agent.

As Ohama does not teach activated carbon coated with a coating material as in Applicants' claimed invention, it would not have been obvious to one skilled in the art to incorporate the add-on level recited in Applicants' twice amended Claim 1.

The rejection of Claims 7, 44, 45, 52, and 53 under 35 U.S.C. §103(a) as being unpatentable over Ohama (U.S. Patent 5,703,152) in view of Mauro et al. (U.S. Patent 5,480,636) and further in view of *Hawley's Condensed Chemical*

*Dictionary*, 14th Edition, is respectfully traversed. Claims 7, 44, 45, 52, and 53 depend from one of Claims 1, 27, and 47, and are thus patentable for at least the same reasons as above. As discussed above, Ohama does disclose a deodorizing composition for drying on activated carbon, but does not teach a coating material including a water-insoluble binding agent as in Applicants' claimed invention of 1, 27, and 47. Mauro et al. discloses deodorizing materials, and does not disclose or suggest coating activated carbon with a water-insoluble binding agent and a masking agent that masks the dark color of activated carbon. *Hawley's Condensed Chemical Dictionary* teaches known gas odorants and has not been alleged to disclose or suggest any coating of activated carbon. Therefore, it would not have been obvious to one skilled in the art to coat activated carbon as in Applicants' Claims 7, 44, 45, 52, and 53.

The rejection of Claims 40, 46, and 54 under 35 U.S.C. §103(a) as being unpatentable over Ohama (U.S. Patent 5,703,152) in view of Pyzel (U.S. Patent 3,731,678) is respectfully traversed. Claims 40, 46, and 56 are dependent from one of amended Claims 27 and 47, and are patentable for at least the same reasons as above. Pyzel does disclose the use of activated carbon for use in a respirator. However, Pyzel does not disclose or suggest coating the activated carbon with any coating material. The activated carbon of Pyzel is contained inside casing 10, and is

not seen by the user. (Column 6, lines 11-13). Therefore, one skilled in the art reading Pyzel would not find any suggestion or motivation to coat the granules of activated carbon with a coating material including a masking agent. It would not have been obvious to one skilled in the art to coat the granular activated carbon of Pyzel with a coating material including either a water-insoluble binding agent and masking agent or an elastomeric binding agent, as in Applicants' claimed invention.

### **Conclusion**

Applicants intend to be fully responsive to the outstanding Office Action. If the Examiner detects any issue which the Examiner believes Applicants have not overcome in this response, Applicants' undersigned attorney requests a telephone interview with the Examiner.

Applicants sincerely believe that this Patent Application is now in condition for allowance and, thus, respectfully requests early allowance.

Respectfully submitted,



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**Marked-up Version Showing Changes Made**

**In the Claims:**

1. (Twice Amended) Activated carbon coated with a water-insoluble coating material [comprising a binding agent and a masking agent] that masks a color of the activated carbon, the coating material including a masking agent and a water-insoluble binding agent that binds the masking agent to the activated carbon, the coating material having an add-on level relative to the uncoated activated carbon of at least 5%, and the coated activated carbon having a Relative Adsorption Efficiency with respect to at least one odoriferous agent of at least 30%, the odoriferous agent being selected from the group comprising ammonia, triethylamine, trimethylamine, dimethyldisulphide, and isovaleric acid.

27. (Amended) Coated activated carbon comprising activated carbon coated with a colored coating material [comprising a binding agent and a masking agent], the colored coating material including a colored masking agent and a water-insoluble binding agent that binds the colored masking agent to the activated carbon, the coated activated carbon having a HunterLab L value of at least 40 and an absolute "a" value or absolute "b" value greater than 10.



Claim 28 has been canceled.

47. (Amended) Coated activated carbon coated with a coating material comprising [an] a water-insoluble elastomeric binding agent, the coated activated carbon having a Relative Efficiency for Adsorption of Ammonia of at least 30%.

55. (Amended) Activated carbon particles coated with a colored coating material, the colored coating agent comprising a deformable water-insoluble binding agent having a Shore A hardness of less than 70 and having an absolute HunterLab "a" value or absolute HunterLab "b" value greater than 10.

58. (Amended) An activated carbon material coated with a coating material comprising a water insoluble binding agent and a pigment effective to mask a color of the activated carbon, wherein the color of the activated carbon material is neither white, gray, nor black.

80. (New) A composition for removal of an odiferous agent, comprising:

a quantity of activated carbon;

a water-insoluble coating material on a surface of the activated carbon effective to mask a color of the activated carbon;

the water-insoluble coating material including at least one of an opaque masking agent and a colored masking agent and a water-insoluble binding agent that binds the masking agent to the surface of the activated carbon;

wherein the composition has a Relative Adsorption Efficiency with respect to at least one odoriferous agent of at least 30%, the odoriferous agent being selected from a group comprising ammonia, triethylamine, trimethylamine, dimethyldisulphide, and isovaleric acid.

81. (New) The composition of Claim 80, wherein the binding agent includes an elastomer.

82. (New) The composition of Claim 80, wherein the binding agent includes a polymer selected from a group consisting of latex, a silicone compound, and combinations thereof.

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83. (New) The composition of Claim 80, wherein the coating material includes a blowing agent.

84. (New) The composition of Claim 80, wherein the coating material is porous.